

REMARKS

Claims 1-36 were pending in the application. Claims 1-36 are cancelled and replaced with new claims 37-64, which are written to conform with U.S. practice. New claims 37-45, drawn to a method, correspond to original claims 6-15. New claims 46-64, drawn to an apparatus, correspond to original claims 16-36. No new claims correspond to original claims 1-5 drawn to a knitted fabric.

Regarding the introduction of the term "weft" knitted fabric into the claims, two types of loop formations are known in the knitting art. In one technique, a thread is processed in the direction of the loop courses. In the other technique, a thread is processed in the direction of the stitch wales. Products made using the first technique are known in the art as "one-thread-fabrics," "weft fabrics," or "coulier goods." Products made using the using the second technique are called "warp knit goods" or "warp fabrics." The difference between the two techniques is that, in weft knitting, a thread is fed to a plurality of needles passing a thread guide one behind the other, whereas in warp knitting, a thread fed to a knitting needle is wound around one and the same needle for a plurality of times by means of an eye needle or a thread laying means such that every needle can be considered as a knitting system. Further, machines working with the weft knitting technique normally are called weft knitting machines, whereas machines working with the other technique are called warp knitting machines. In the English language, the two techniques are known as "weft knitting" and warp knitting."

New claims 37 and 46 are drawn to a method and an apparatus for producing a weft knitted fabric, respectively. The invention described in the specification concerns only the production of weft fabrics and, therefore, only weft knitting machines. This can be derived from a number of paragraphs in the present specification such as the third and fourth paragraphs on page 1, the first paragraph on page two and references therein, the last paragraph on page 3 through the first paragraph on page 4, Fig. 1 in combination with the last paragraph on page 6 and first paragraph on page 7, the paragraph bridging pages 8 and 9, the third paragraphs on pages 9 and 10, the fourth

paragraph on page 12, and first paragraph on page 17. There is no hint in the aforementioned paragraphs with respect to warp knitting and only the usual knitting machines, particularly circular (weft) knitting machines are described.

Support for the inclusion of the limitation of "a continuous yarn material" in claims 37 and 46 may be found, for example, in the specification on page 2, lines 31-33 and page 6, lines 10-15. Support for the new claims may otherwise be found in the claims as originally filed. No new matter is added.

Claims Rejections 35 U.S.C. 102

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by **Walford** (US 3,877,254). The Examiner's rejection has been carefully considered.

Claims 1-5 are cancelled and are not replaced with corresponding new claims. Arguments regarding the rejection are presented, however, in the interest of compact prosecution to distinguish the presently claimed invention from the Walford disclosure.

The presently claimed invention is drawn to a method and apparatus in which a yarn is produced and used in a weft knitting process by drawing a continuous fiber material in a drawing equipment and then to provide the fiber material with twists in a spinning device. The continuous fiber material is then fed directly to a knitting point of a weft knitting machine, without winding the material onto a supply spool and then transporting the supply spool to a knitting machine.

Walford discloses two ways of producing weft knitted goods using hairpin-shaped fiber loops, but does not disclose a method or apparatus in which a continuous fiber material is fed directly into a knitting point of a weft knitting machine.

Walford discloses a method and a device for producing a weft fabric from single, hairpin-shaped loops 15 which, it is asserted, consist of substantially untwisted, parallel fibers. It is doubtful that this is possible, considering the fact that the loops are made by means of a rotating brush 9 and a wheel 12 having hooks. It seems to be sure, however, that the single loops 15 will not always consist of a same number of fibers and that also the length of fibers within the loops will not be constant. The weft knitting fabric will, therefore, have a varying strength and a normally undesirable, non-uniform stitch formation. Additionally, the device disclosed by Walford has the disadvantage that the hooks 11 of wheel 12 must run through brush 9 and the needle hooks must pass through hooks with a very small distance (Fig. 4). Consequently, a uniform stitch cannot be ensured and high wear cannot be avoided.

Referring to Fig. 6 in Walford, a device is disclosed in which, together with a spinning element 39, the hairpin loops 15 can be formed into a yarn. Contrary to the presently claimed invention, the yarn is wound onto a supply spool 41 in order to process the yarn to a knit fabric at a later time in a second process step (column 10, lines 21-22).

Claims 1-11, 14, 16, 18, 21-23, 26-29, and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by British patent document **GB 1538924**. The Examiner's rejection has been carefully considered.

New claims 37-45 correspond to original claims 6-11, and 14, now cancelled. It is noted that original claims 12, 13, and 15 corresponding to new claims 42, 43, and 45 and original claims 19, 24, 25, 30-32, and 34-36 corresponding to new claims 48, 53, 54, 58-60, and 61-64 were not rejected. Applicant, therefore, assumes that new claims 42, 43, 45, 54, 58-60, and 61-64 are free of the prior art. The following arguments are presented to distinguish the presently claimed invention from GB 1538924 as it might be applied to new claims 37-64.

GB 1538924 discloses only the production of an intermediate product in the form of a warp knitted yarn and the transfer of the yarn onto a supply spool. New claims 37-64 recite a method and an apparatus for producing a weft knitted fabric. GB 1538924 does not anticipate, or render obvious, the presently claimed invention because it does not disclose, or teach or suggest, a method or an apparatus for producing a weft knitted fabric.

GB 1538924 discloses a method similar to that disclosed by Fig. 6 in Walford. Contrary to Walford, however, a continuous fiber roving drawn in a drafting device is used, and the fiber band is provided with twists on its way from the drafting device to the knitting needles 222, 224 by means of at least one spinning device 216, 254. It is noteworthy, however, that the object underlying this document is the same as disclosed in Fig. 6 of Walford, namely to produce at first a yarn 212 (not a fabric) by means of the knitting needles 222, 224 (equivalent to a cord-like product, see page 5, lines 69-73 and page 2, lines 1-5 of GB 1538924).

The yarn disclosed by GB 1538924, designated as a loop fabric, must be a warp fabric rather than a weft fabric because it is made of warp stitches and consists either of only one stitch wale (as shown in Figs. 16-18) or of two stitch wales (as shown in Fig. 19). One skilled in the art would not be able to produce such a fabric using a weft knitting technique and/or a cord-like yarn in a modern weft knitting machine, as presently claimed, because the warp loops become entangled in the needle hooks or needle latches. Nothing in GB 1538924 hints at how the yarn could be used in a modern weft knitting machine or how to achieve a uniform stitch formation by means of weft knitting a fabric with such a yarn.

In view of the foregoing arguments, Applicant believes that new claims 37-64 are not anticipated by Wilford or GB 1538924 or unpatentable over Wilford or GB 1538924, or a combination thereof.

Conclusion

The application in its amended state is believed to be in condition for allowance. Action to this end is courteously solicited. Should the Examiner have any further comments or suggestions, the undersigned would very much welcome a telephone call in order to discuss appropriate claim language that will place the application into condition for allowance.

Respectfully submitted,



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